Extension Bulletin
No 57

HOG HOUSES AND EQUIPMENT

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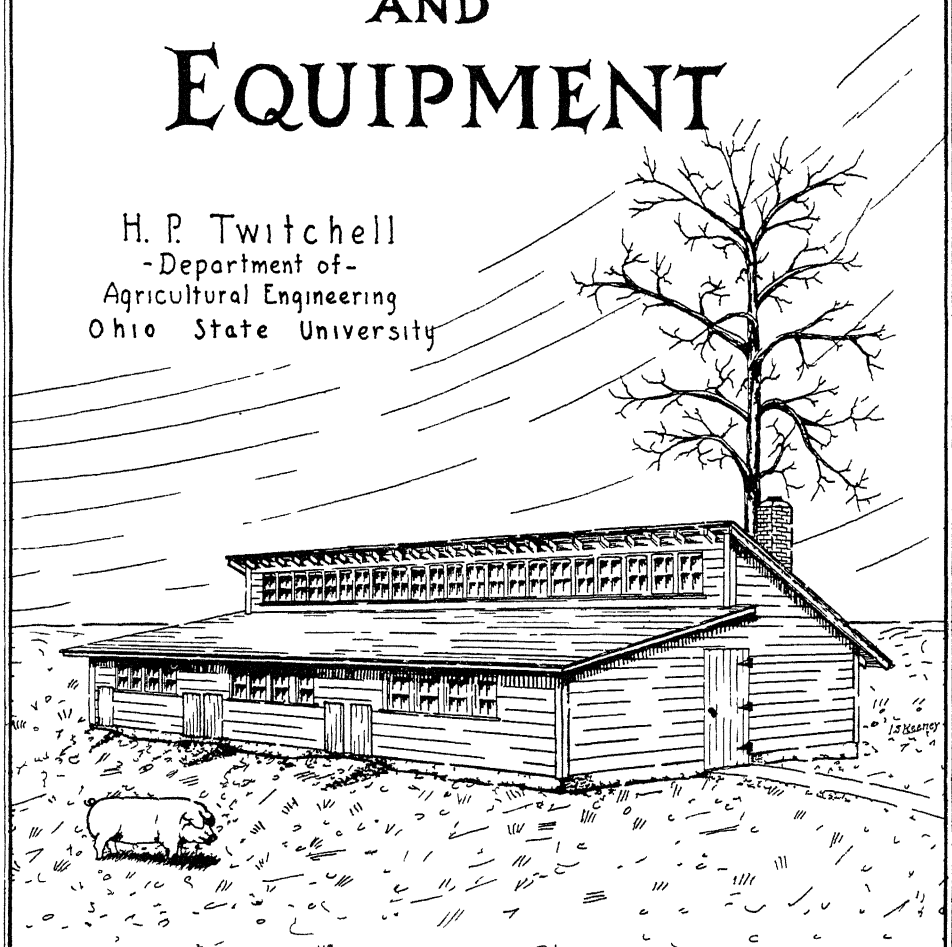

The Ohio State University, Columbus, and U. S. Dept. of Agriculture, Cooperating
Agricultural College Extension Service, H C Ramsower, Director.
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THAT the prospective builder may have plans from which he can select and build, this bulletin is offered. Specifications and working drawings covering centralized houses, individual houses, and the more common hog equipment are presented in the order named.

HOG HOUSES AND EQUIPMENT

By

H. P. TWITCHELL

Centralized Houses

Selecting the Type of House. The centralized houses pictured on the following pages are alike in arrangement and details of construction, but differ in the form of the roof, size of the pens, and width of the central alley. Each type has points in its favor, and it is largely local conditions and personal preference which will determine the house to build. The length of any house can be adjusted to accommodate the required number of brood sows.

Specifications for Centralized Houses

Interior Arrangement. A standard interior arrangement is two rows of pens on both sides of a central feed alley.

Feed Storage. Feed storage may be supplied in one of the following ways:

(1) By setting aside one or more pens as feed rooms.

(2) By providing overhead storage which will require building a type of house such as shown on pages 10 and 12.

(3) By building a corncrib or granary as part of the hog house as suggested on page 22. This method is strongly recommended as a time and labor saver. The corncrib driveway can be used as a feeding floor.

Foundations. Concrete foundations should be 6 inches thick, go at least 18 inches below and 12 inches above grade.

Floors. The floor of the pens should be laid with its underneath surface above the outside ground level. It should slope from the wall to the gutter with a total fall of 3 inches as dimensioned in the drawings. Give the surface an even finish with a wood float.

The floor of the pens should be constructed according to one of the following methods:

(1) **Concrete.** A floor of this type is shown on pages 6 and 13. Lay 2½ inches of concrete on several inches of well-tamped cinders or gravel. The floor should be made damp-proof by placing a layer of heavy tarred paper between the concrete and the cinders. A solid concrete floor of this type sometimes requires a wood overlay at farrowing time.

(2) **Hollow Tile.** A floor of this type is shown on pages 9 and 14. Lay hollow tile (clay blocks) 4 or 5 inches thick on the correctly graded earth, sand, or cinders, butting the tile together without mortar joints. Spread 1 inch of cement mortar on top of the tile and finish with a wood float.

(3) **Wood Block, Cork, Brick, or Asphalt.** These types are recommended but no plans are shown.

Driveway Floors. Floors for a driveway should be 5 inches thick at the crown, and nowhere less than 4 inches thick.

Gutters. Floor drains are not recommended, since they have a tendency to clog. Floor drainage should be toward gutters in the central alley where the liquid will collect and can be removed periodically or conducted to a manure pit. See "Floor Detail" on pages 6, 9, 10, and 13 of the drawings for the construction of the various types of gutters.

Walls (frame construction). The sill should be bolted to the foundation with ⅝" by 12" bolts spaced about 8 feet on center. Studs should be set vertical and placed according to the floor plan. Around the windows, space the studs the width of the sash plus a small amount for play so they will open easily. Drop siding, 1" by 6", should be nailed horizontally to the studs.

Walls (hollow tile construction). Hollow tile walls should be at least 5 inches thick.

Rafters. Lay all rafters 24 inches on center of such length and size as dimensioned on the drawing.

Roof Sheathing. For prepared roofing lay 1 inch boards solid.

Roofing. Prepared roofing may be used either in rolls or as shingles.

Partitions. All pen partitions should be made removable that the entire house may be thrown into a feeding floor or sleeping quarters. Partitions should be 3 ft. 6 in. high at the alley and may be made of solid or of open construction. The details on page 17 show solid construction, which is preferred by most hog breeders. All alley partitions should be made with swinging panels as shown on page 17 for ease in filling the feed troughs.

Feed Troughs. V-shaped wood or round bottom metal troughs are recommended. See wood construction on page 17.

Guard Rails. Pig saving guard rails or pig fenders should be built in all pens. Two types of guard rails are shown in the drawings on page 17.

Hog Doors. Hog doors should be 25 inches wide and 42 inches high and may be constructed according to one of the types shown on page 16. The type that slides up can be used only in the houses having 6-foot studs.

Ventilation. ...Fresh air can be taken in through windows provided with ventilating shields mentioned below and shown in Fig. 12. Foul air may be taken out by means of a ventilator head or cupola on the roof, opening at the ceiling and controlled by a damper.

Windows. Windows may be any 4-light barn sash. The studs should be spaced the width of the sash to serve as window frames and the siding should run ¾-inch past the studs to catch the sash and act as window casing. Window spring bolts hold the sash in place. Triangular-shaped ventilator shields may be nailed to the studs at the sides of the sash to direct the air up when the windows are open. Window guards should be provided to prevent the sows from breaking the glass, although if the windows are placed high up against the plate this will usually not be necessary.

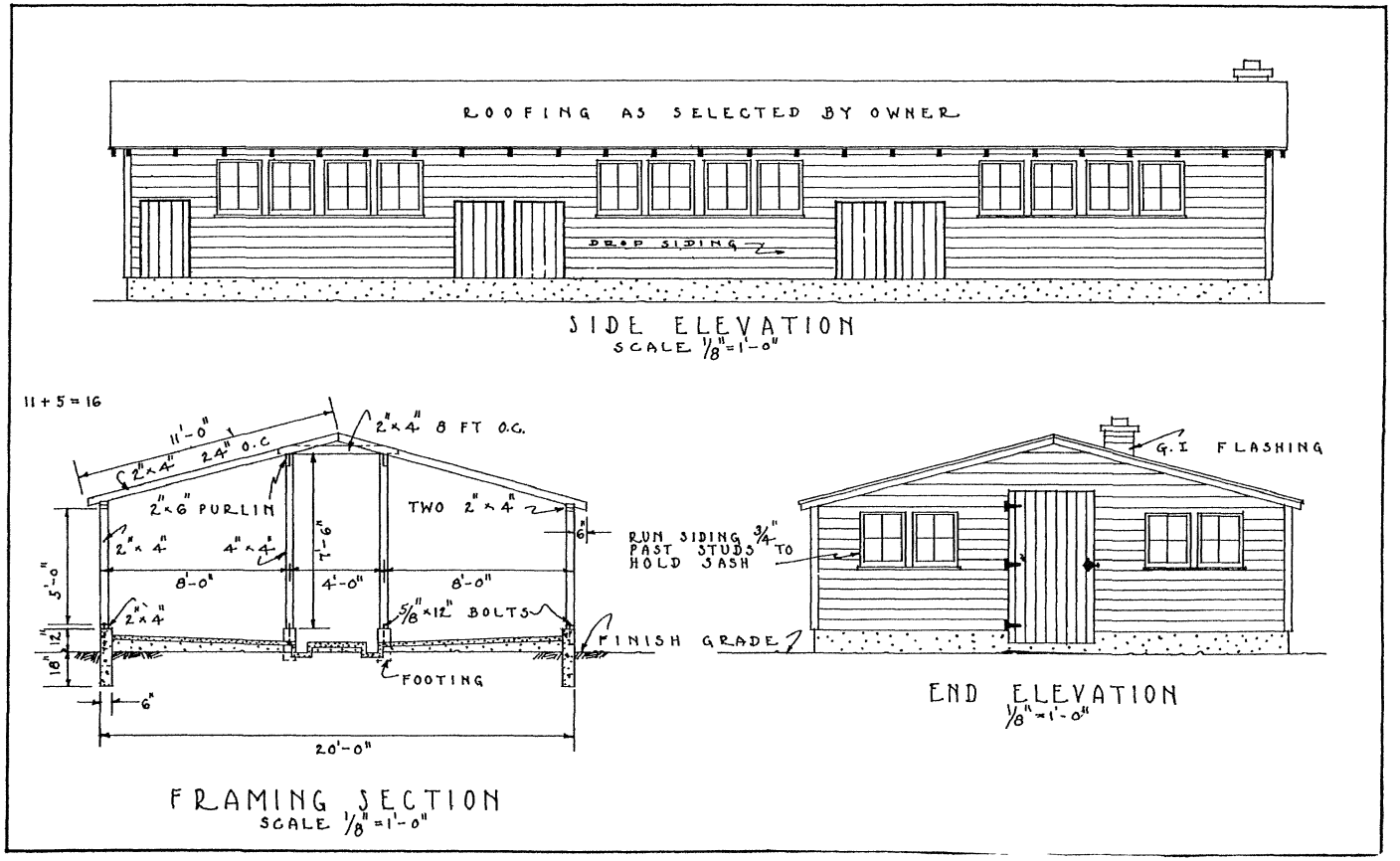

Fig. 1.—A gable roof house to run north and south. No skylight windows. To make a complete set of drawings add Figs. 2, 12, and 13.

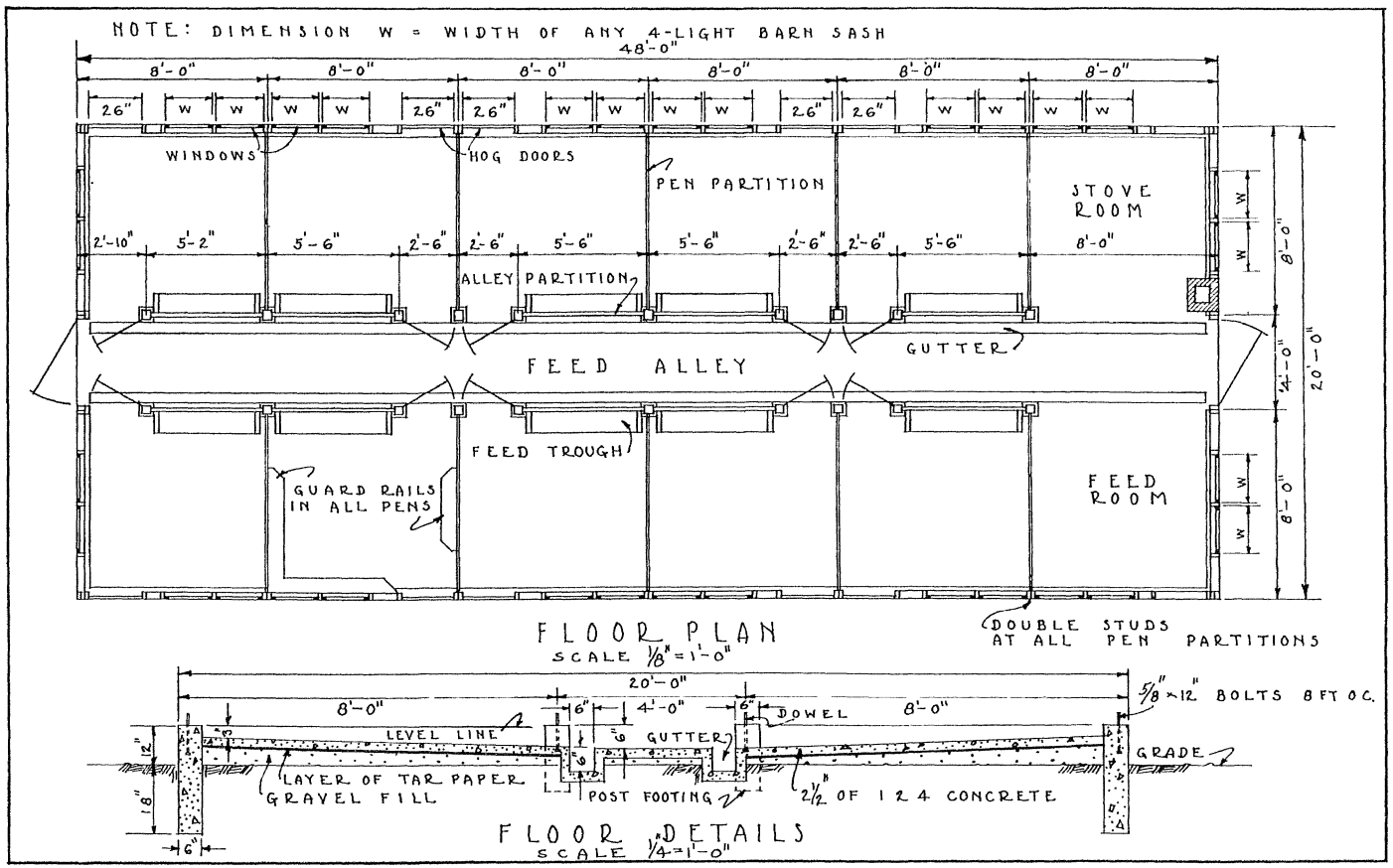

Fig. 2.—Floor plan for houses shown in Figs. 1 and 3.

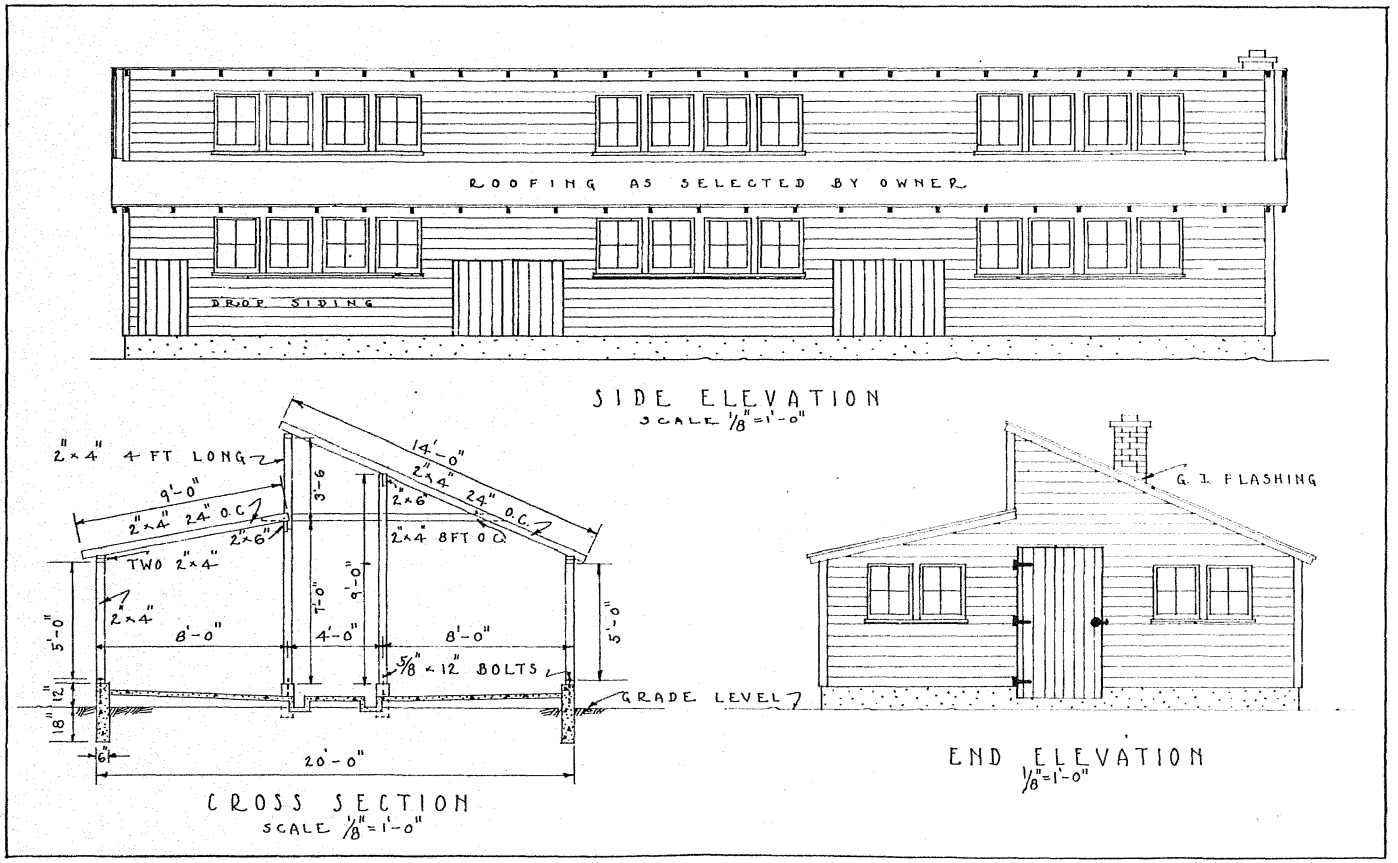

Fig. 3.—A half-monitor house to run east and west. No windows need be placed in north wall. To make a complete set of drawings add Figs. 2, 12, and 13.

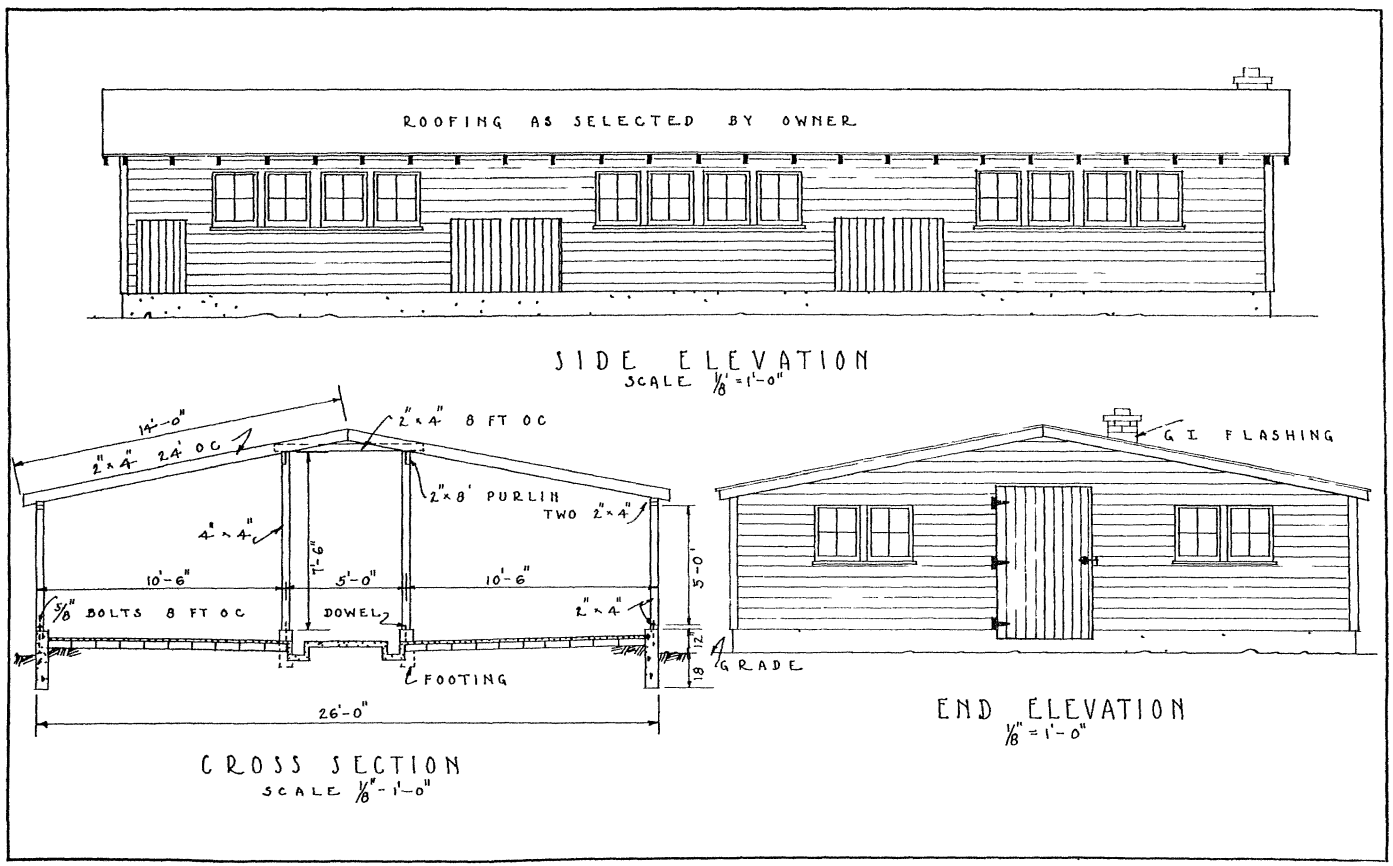

Fig 4 —A gable roof house to run north and south similar to Fig 1 but having larger pens and wider feed alley. To make a complete set of drawings add Figs. 5, 12, and 13.

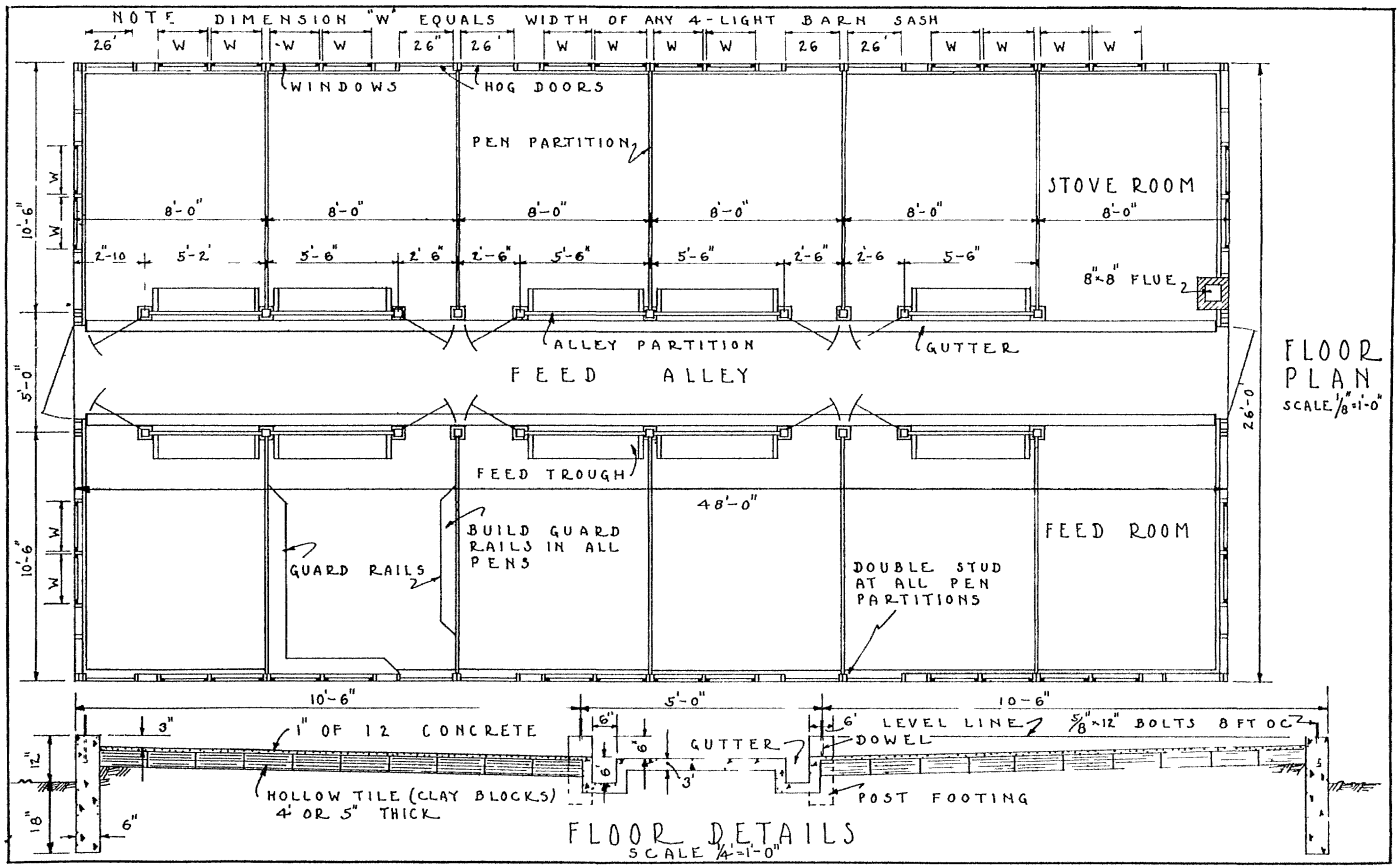

Fig. 5 —Floor plan for houses shown in Figs 4 and 6.

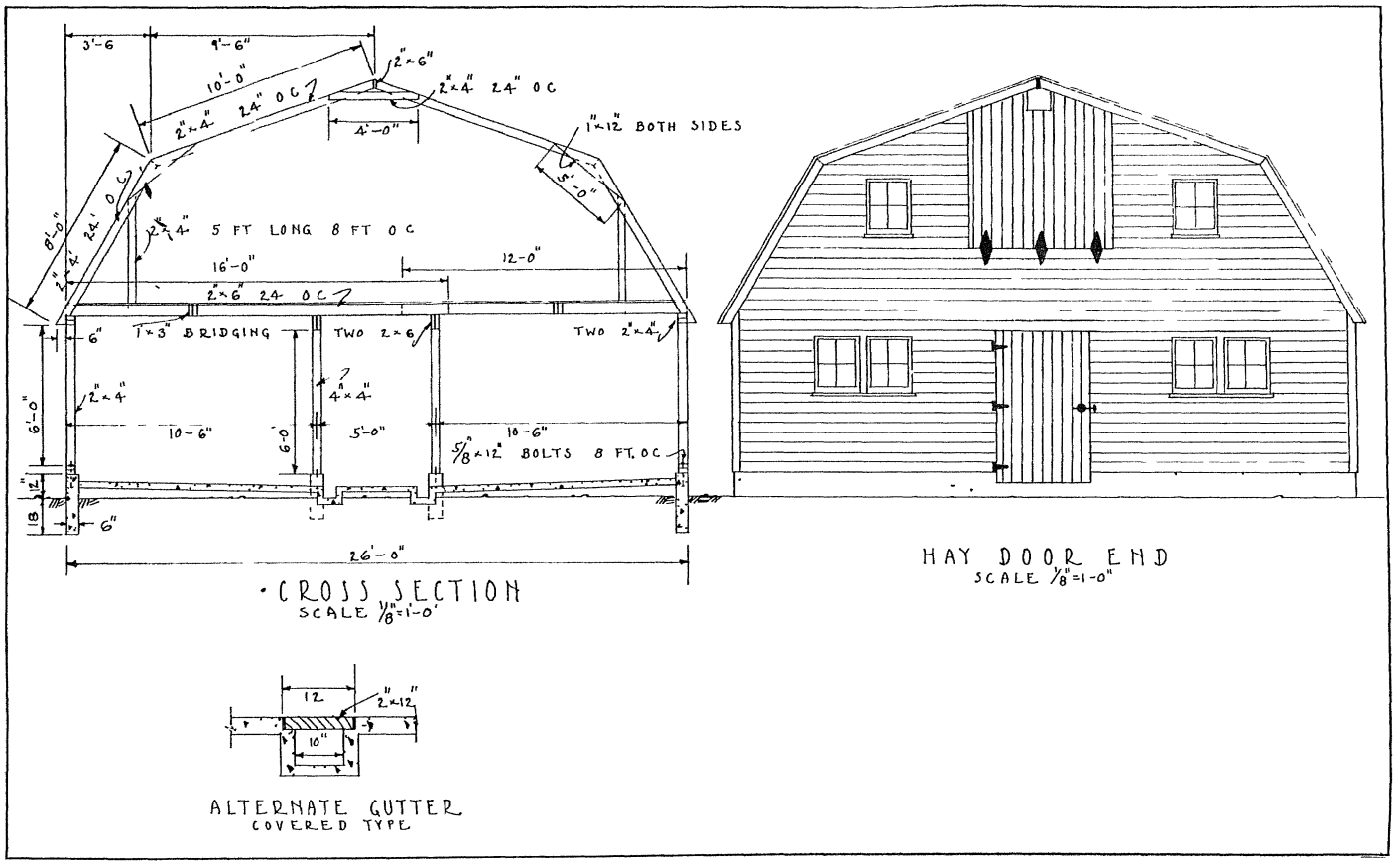

Fig. 6—A gambrel roof house with mow to run north and south. To make a complete set of drawings add Figs. 5, 7, 12, and 13.

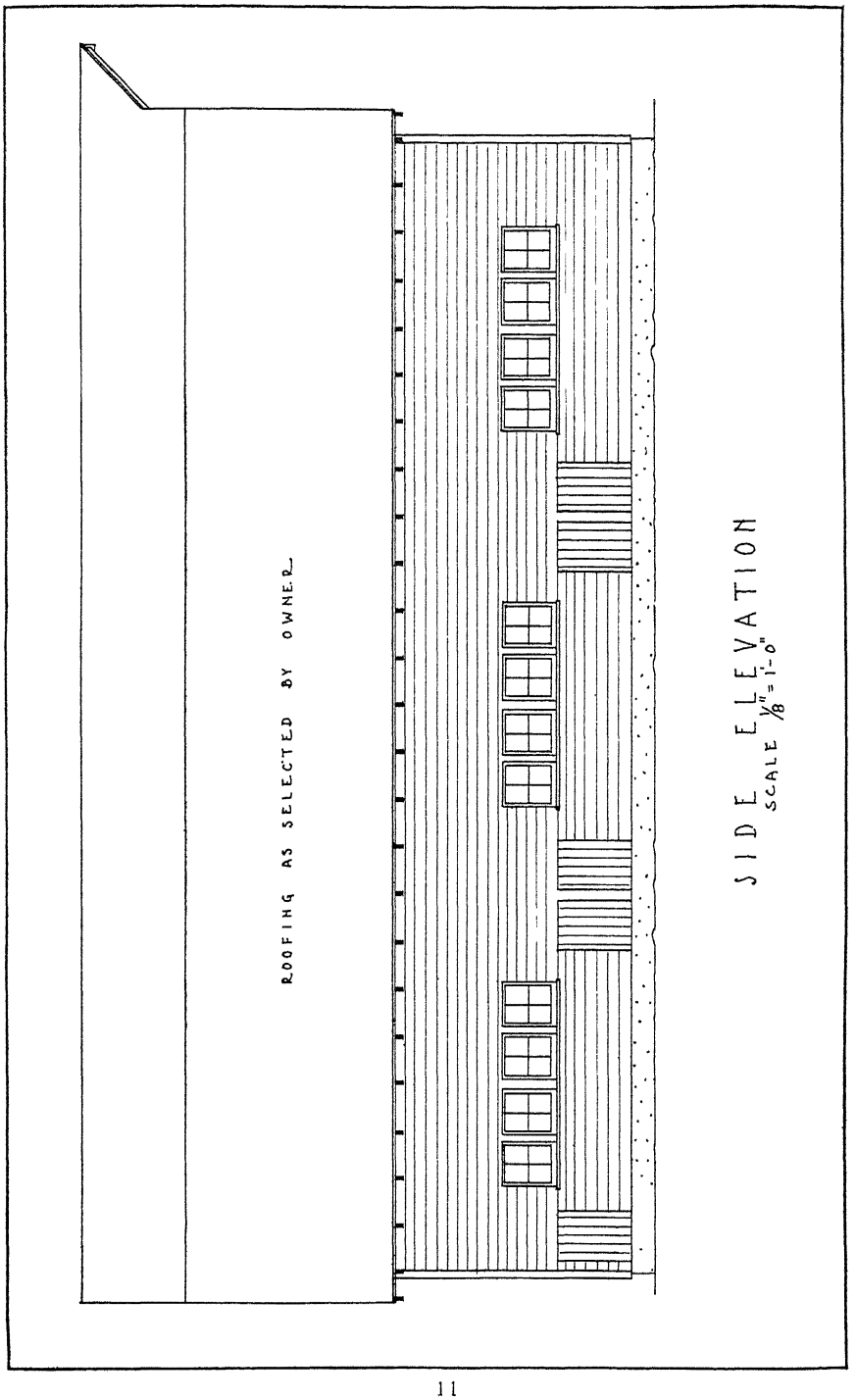

Fig. 7.—Side elevation of the gambrel roof house shown in Figs. 6 and 8.

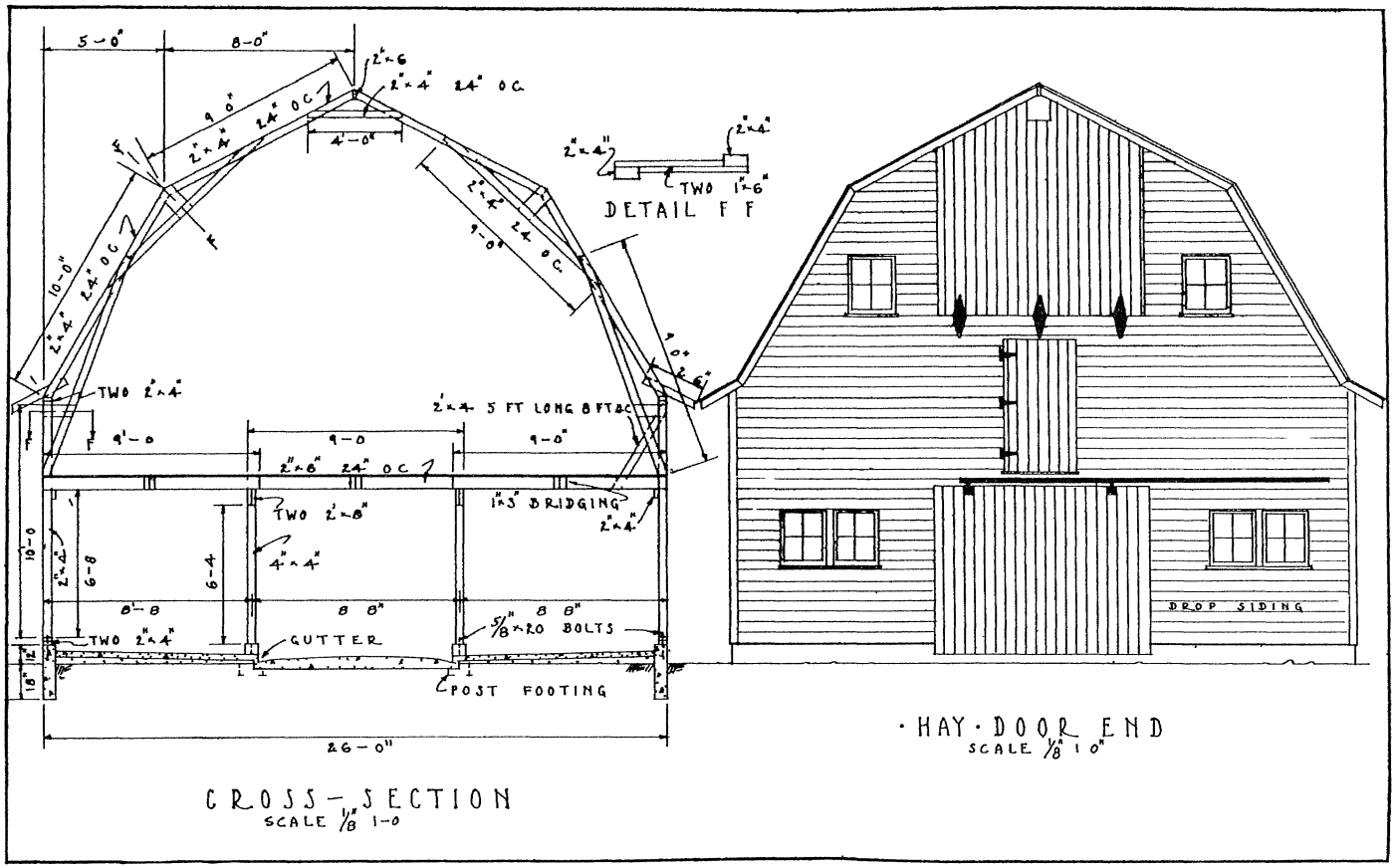

Fig 8—A gambrel roof house to run north and south similar to Fig 6 but with more mow capacity and central driveway To make a complete set of drawings add Figs 7 9 12 and 13

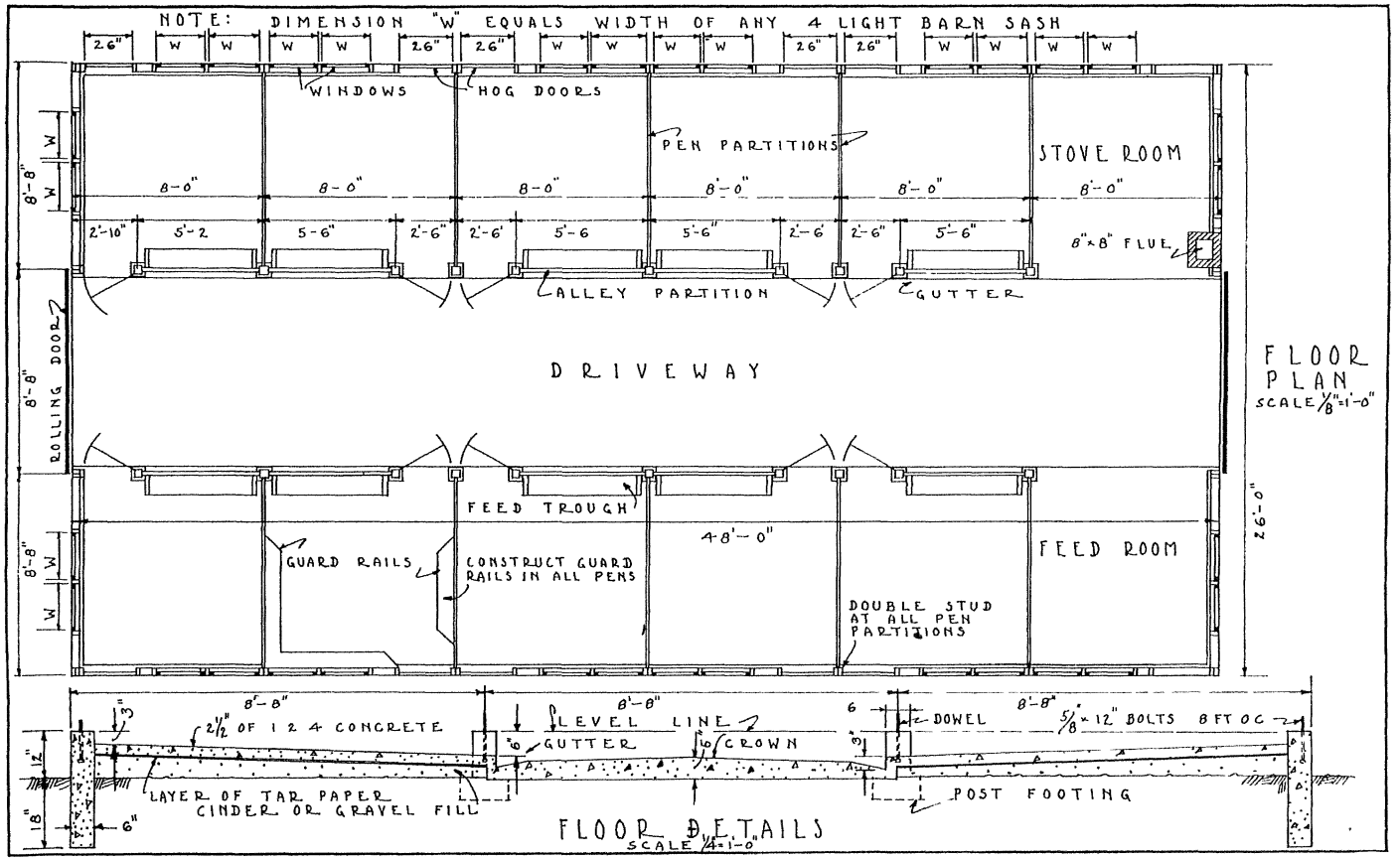

Fig. 9.—Floor plans for a house with 8′ x 8′ pens and driveway. Add this sheet to Fig. 8 to make a complete set of drawings.

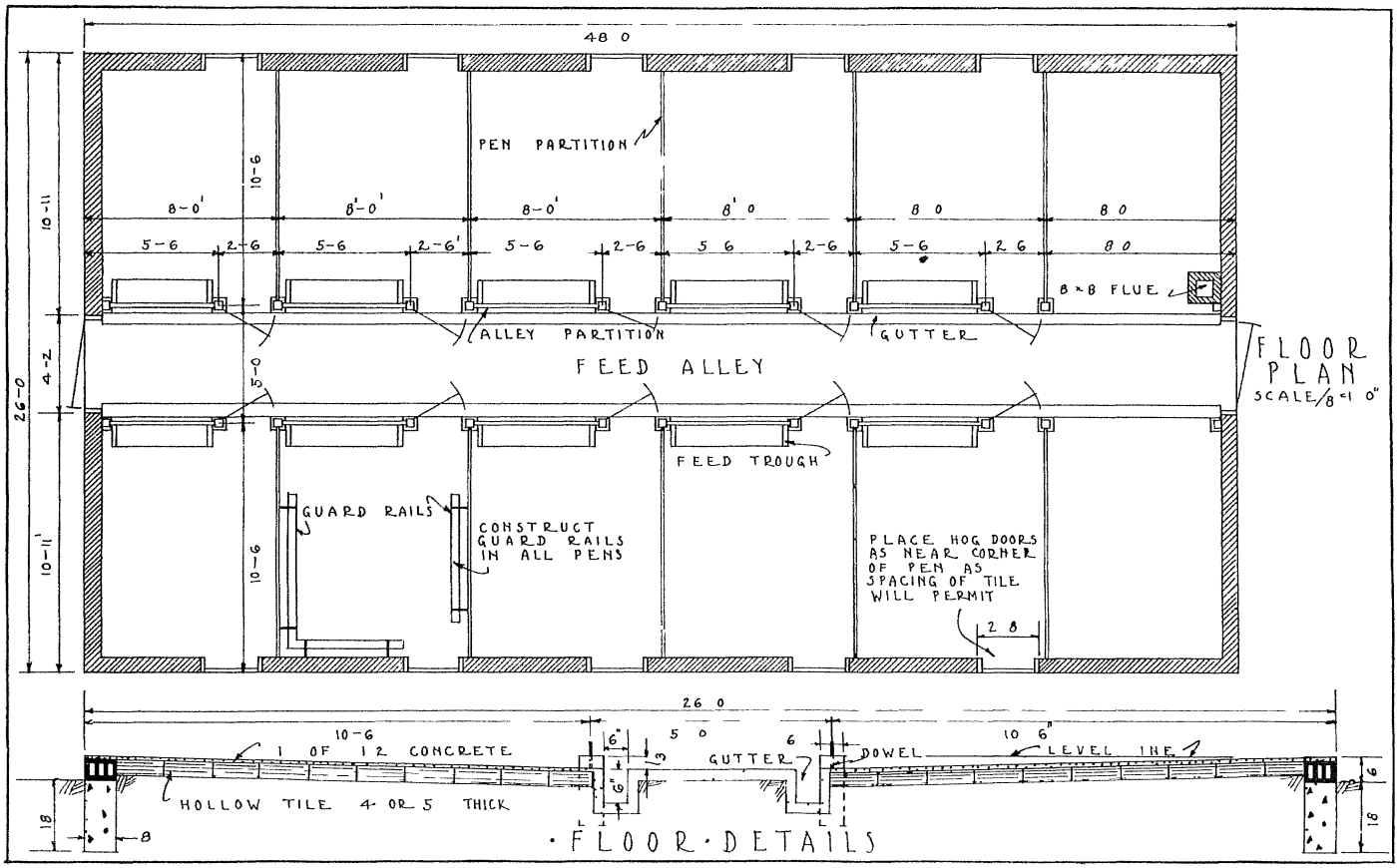

Fig 10 —Floor plans for a house of hollow tile construction with 8' x 10' pens and 5 foot central alley Add this sheet to Fig 11 to make a complete set of drawings

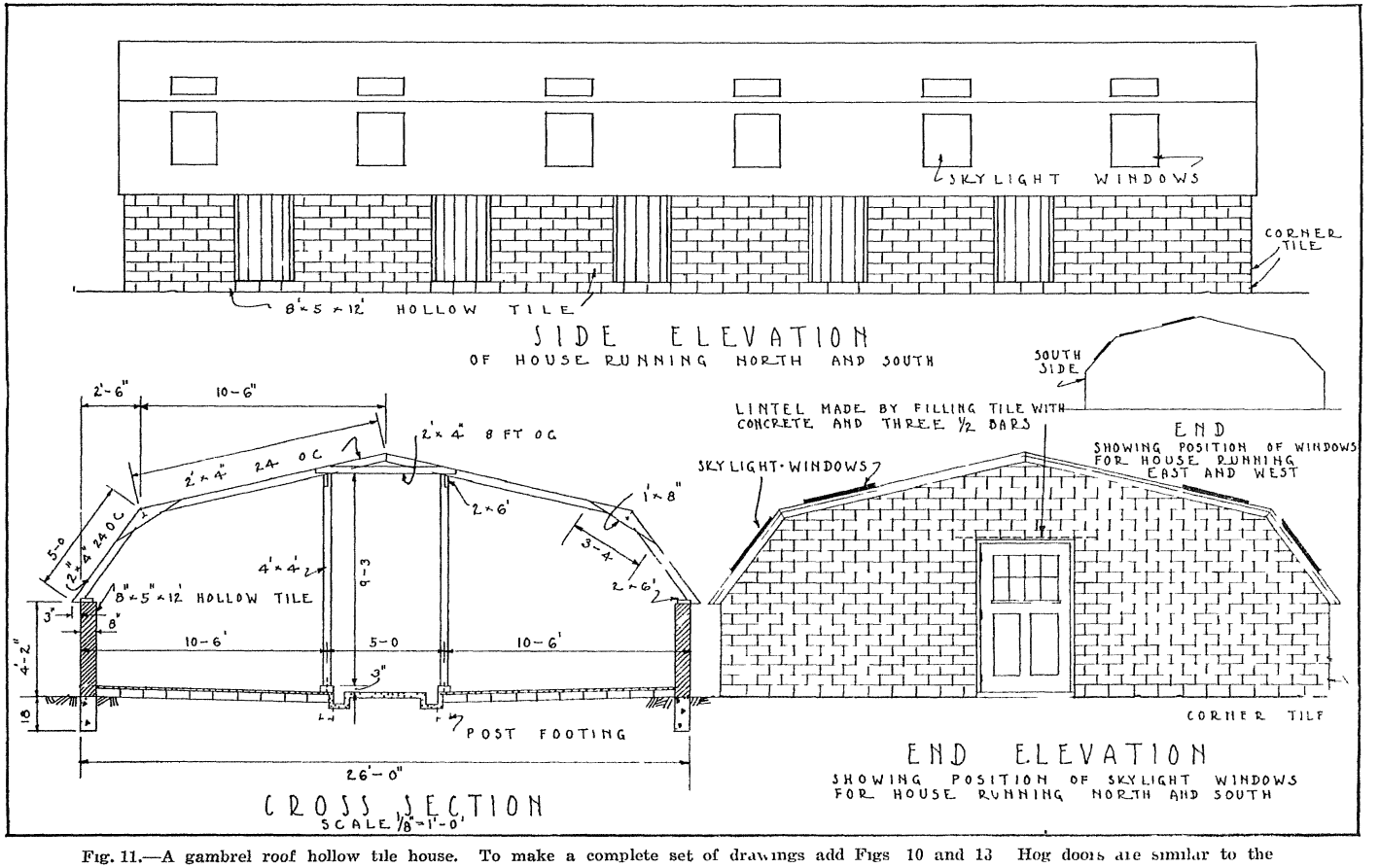

Fig. 11.—A gambrel roof hollow tile house. To make a complete set of drawings add Figs 10 and 13 Hog doors are similar to the hinge type in Fig. 12.

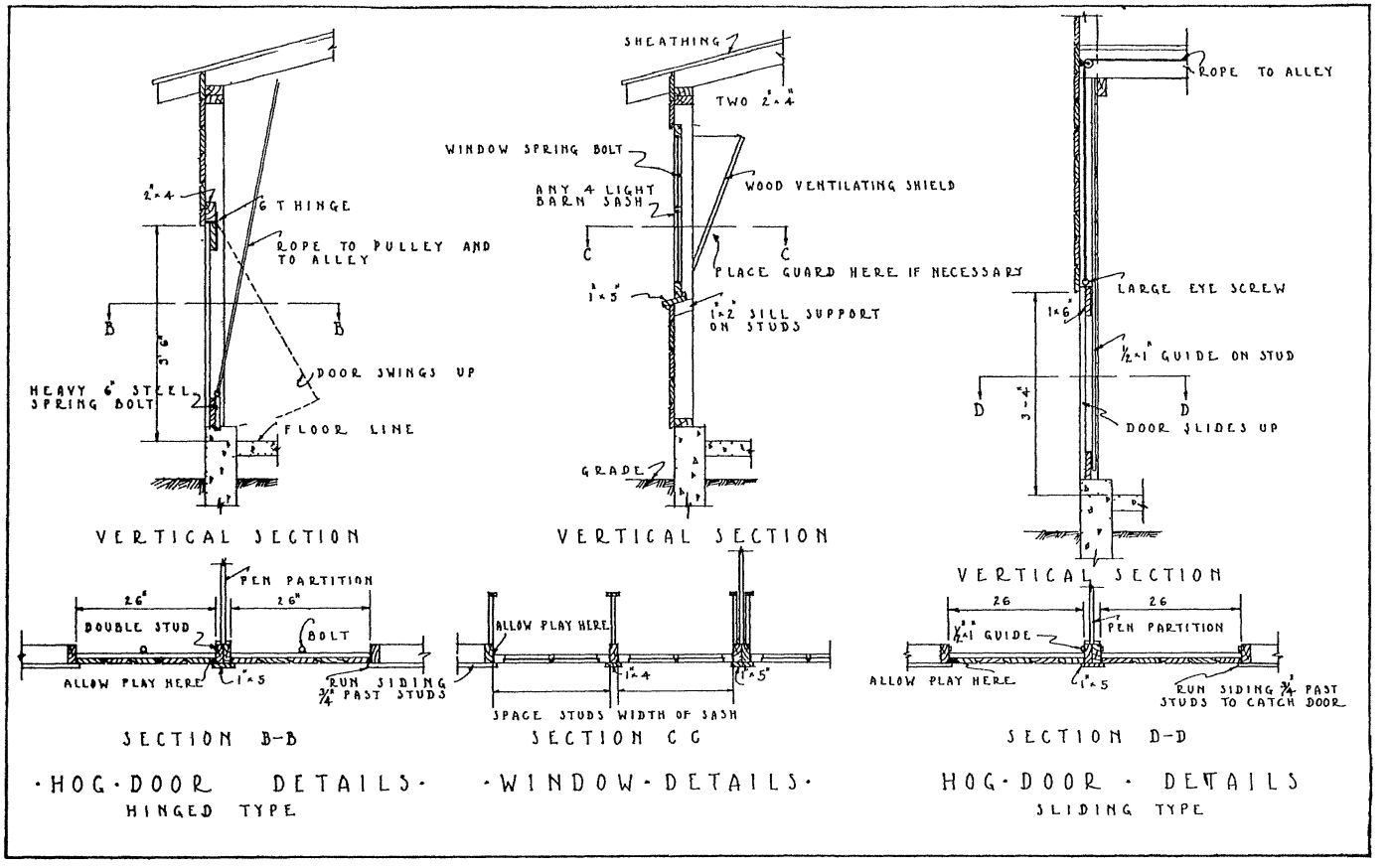

Fig 12—Hog door and window details Space the stud the width of the window sash allowing a small amount for play

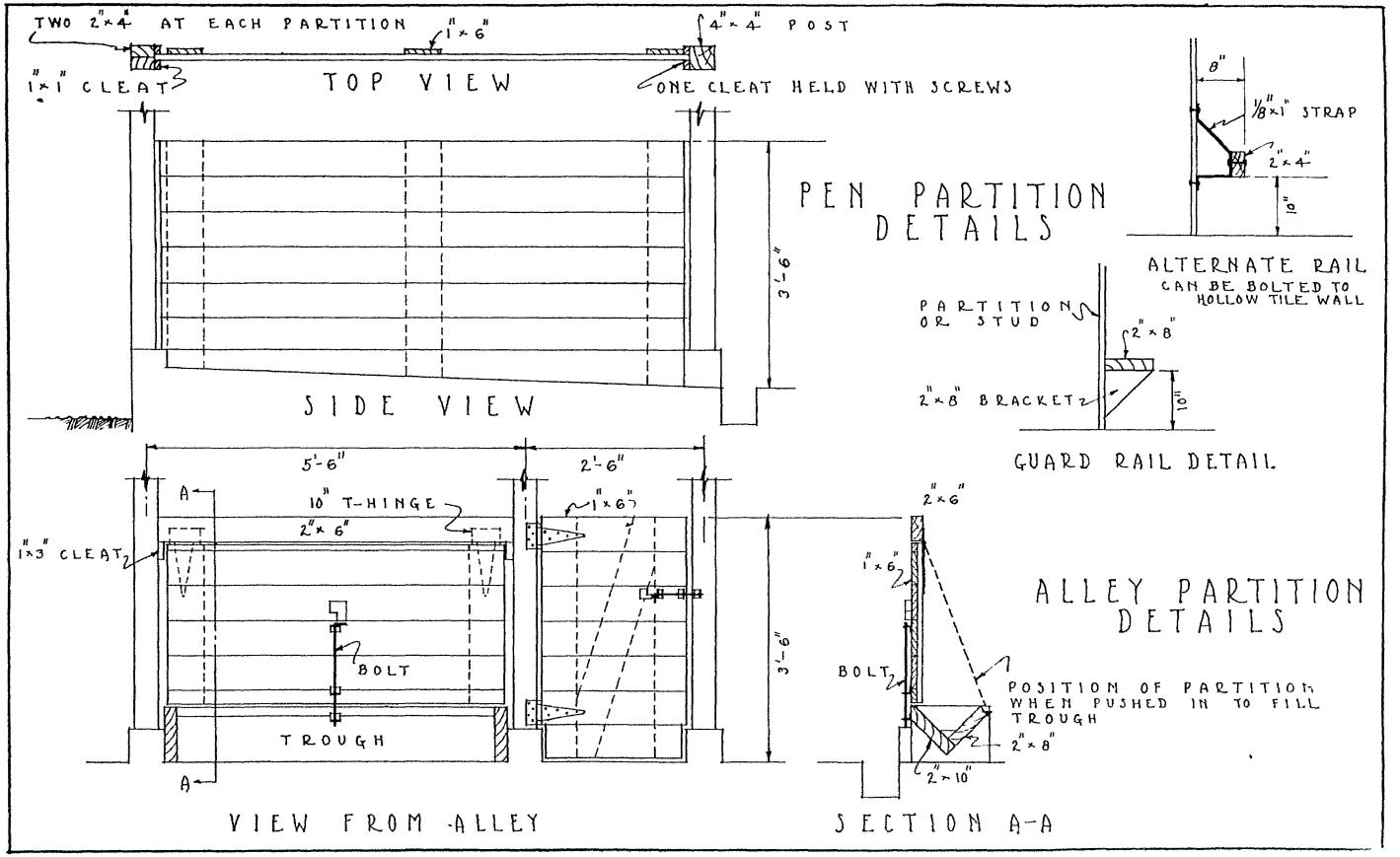

Fig. 13.—Partition, trough, and guard rail details. The pen partitions are removable. The panel in the alley partition swings in. All partitions should be solid construction.

Individual or Movable Houses

The many and varied types of individual hog houses make it impossible to show more than a few methods of construction.

The Gable Roof House

Designed and recommended by John W. Wuichet, Department of Animal Husbandry

The house pictured on page 19 is a combination of the farrowing crate with the individual farrowing house. The particular feature is the provision for guard rails through the center of the house, which makes it practically impossible for the sow to tramp or lie on her pigs, yet gives room for the sow to lie down comfortably to nurse the pigs.

Holes should be bored about 2 or 3 inches apart in the uprights on each side of the door to allow adjustment of the rails for height to conform to the size of the sow; adjustment for width may be had by placing one or both pairs of rails on the inner side of the uprights.

The use of the guard rails in the center position is to be recommended only for those sows that habitually overlie their pigs or for those that are particularly nervous and irritable. Even for sows of that kind, it probably will be necessary to use the guard rails in this position for only a few days, until the pigs are strong enough to take care of themselves fairly well. After that time the door at one end of the house may be fastened shut, and three of the rails fastened around the inside of the house in the usual manner about 8 inches from the floor; the other should be placed up over the door out of the way. If no trouble is anticipated, the guard rails may be placed in the latter position before the sow farrows.

Another feature of the house is the hinged roof, which permits of a vast amount of adjustment for both sunlight and ventilation, and yet affords protection from rain and direct winds; all very important features of any farrowing house. It also allows the herdsman the utmost freedom in taking care of the pigs and cleaning out the house without getting inside. Where the rails are in use through the center and it seems advisable to keep the sow confined, the small door at each side of the pen will be found convenient in giving the pigs a chance to exercise without releasing the sow.

For extremely large sows, it will be necessary to increase the dimensions of the house, but for average sized sows and for gilts, the dimensions as given will suffice. On some farms where the natural drainage is good or where the house is frequently moved to fresh ground, the floor may be omitted, if desired. The runners and the floor should be creosoted to prevent rotting.

Bill of Material

Use	No.	Size	Length	Use	No.	Size	Length
Runners.....	2	4″ x 8″	7′–0″	Guard rail.....	4	2″ x 4″	6′–0″
Floor.....	13	2″ x 6″	6′–0″	Ridge pole.....	1	1″ x 6″	6′–0″
Studs.....	8	2″ x 4″	1′–6″	Braces	4	1″ x 4″	1′–6″
Studs.....	4	2″ x 4″	3′–6″	Roof sheathing...	13	1″ x 6″	6′–6″
Plate.....	2	2″ x 4″	6′–0″	1″x6″ drop siding—145 linear feet in 6-ft. lengths			

Miscellaneous

1 roll prepared roofing
5 lbs. 6d nails
5 lbs. 8d nails
5 lbs. 20d nails
4 extra heavy strap hinges, 6″
4 strap hinges, 4″
8 carriage bolts, ½″ x 5″, with washers and nuts

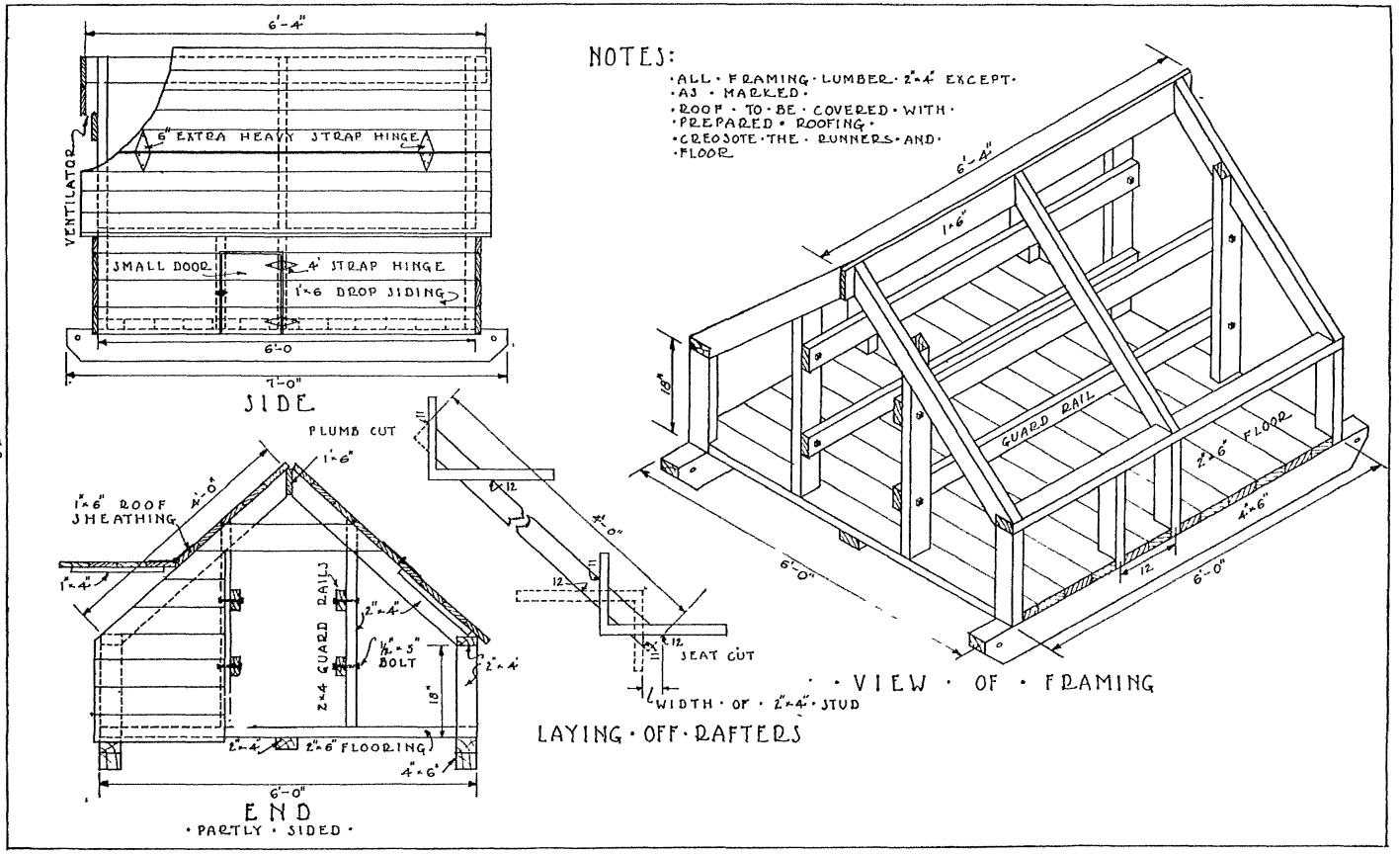

Fig. 14.—A 6′ x 6′ gable roof house. Note the farrowing rails described on page 18.

The A-shaped House

This house is one of the most common types of individual cots. It is of simple construction and easily and quickly built; 1" x 8" shiplap boards make the roof and no other roofing is usually considered necessary. Features of the gable roof house (on page 19) such as guard rails, hinged roof, windows, etc., can be adapted to this house if desired.

Bill of Material

No.	Size	Length	No.	Size	Length
1	2" x 4"	5'-9"	2	2" x 4"	1'-0"
4	2" x 4"	8'-0"	2	4" x 4"	9'-0"
2	2" x 4"	2'-6"	1	1" x 6"	9'-0"
2	2" x 4"	2'-0"	2	1" x 4"	2'-0"

2" planks to cover 48 sq. ft. of floor area,, in 6-ft. lengths
1" x 8" shiplap to cover 144 sq. ft. of surface, in 6-ft. lengths
Two 4" strap hinges for door

Hog Equipment

Pieces of hog equipment that are needed on practically every farm where hogs are raised are shown on pages 22 to 24.

Hog Holding Crate

The holding crate shown on page 23 is adjustable to practically all sized animals.

Bill of Material

No.	Size	Length	No.	Size	Length
10	2" x 4"	2'-3"	2	1" x 4"	4'-0"
6	2" x 4"	3'-6"	2	2" x 10"	6'-0"
6	1" x 6"	6'-0"	2	2" x 4"	4'-6"
1	1" x 10"	6'-0"	2	2" x 8"	4'-6"

4 ⅝" x 5" bolts with washers
12 ⅝" x 7" bolts with washers
6 feet of chain
4 ½" x 1½" lag screws
4 ⅝" x 7" eye bolts

Hog Self Feeder

Page 24 shows a hog self feeder of 35-bushel capacity. While three compartments are shown any number may be provided. A 2-inch opening is dimensioned for the feed outlet, but this can be made wider by removing the 1-inch strips which should be screwed to the frame for this purpose. If 2 inches proves too wide another strip can be screwed on to make the opening smaller. Chain agitators are shown criss-crossing through the interior of the feeder. The pigs soon learn to jerk these chains to bring down the feed.

Bill of Material

No.	Size	Length	No.	Size	Length
2	2" x 4"	7'-0"	1	2" x 4"	6'-0"
8	2" x 2"	3'-6"	3	1" x 4"	2'-6"
4	2" x 2"	3'-4"	1	1" x 7"	6'-0"
2	2" x 2"	6'-0"	1	1" x 8"	6'-0"

45 feet of chain
14 pieces 2" x 6" T and G flooring 3'-4" long
1 piece of galvanized roofing 4" wide 7 feet long
10 pieces 1" x 8" Shiplap 6 feet long
8 pieces 1" x 8" Shiplap 7 feet long
24 pieces 1" x 8" Shiplap 3'-4" long
4 pieces 1" x 1", 6 feet long
3 6" heavy strap hinges and screws
10 ⅛" x 1" strap iron dividers, 12" long

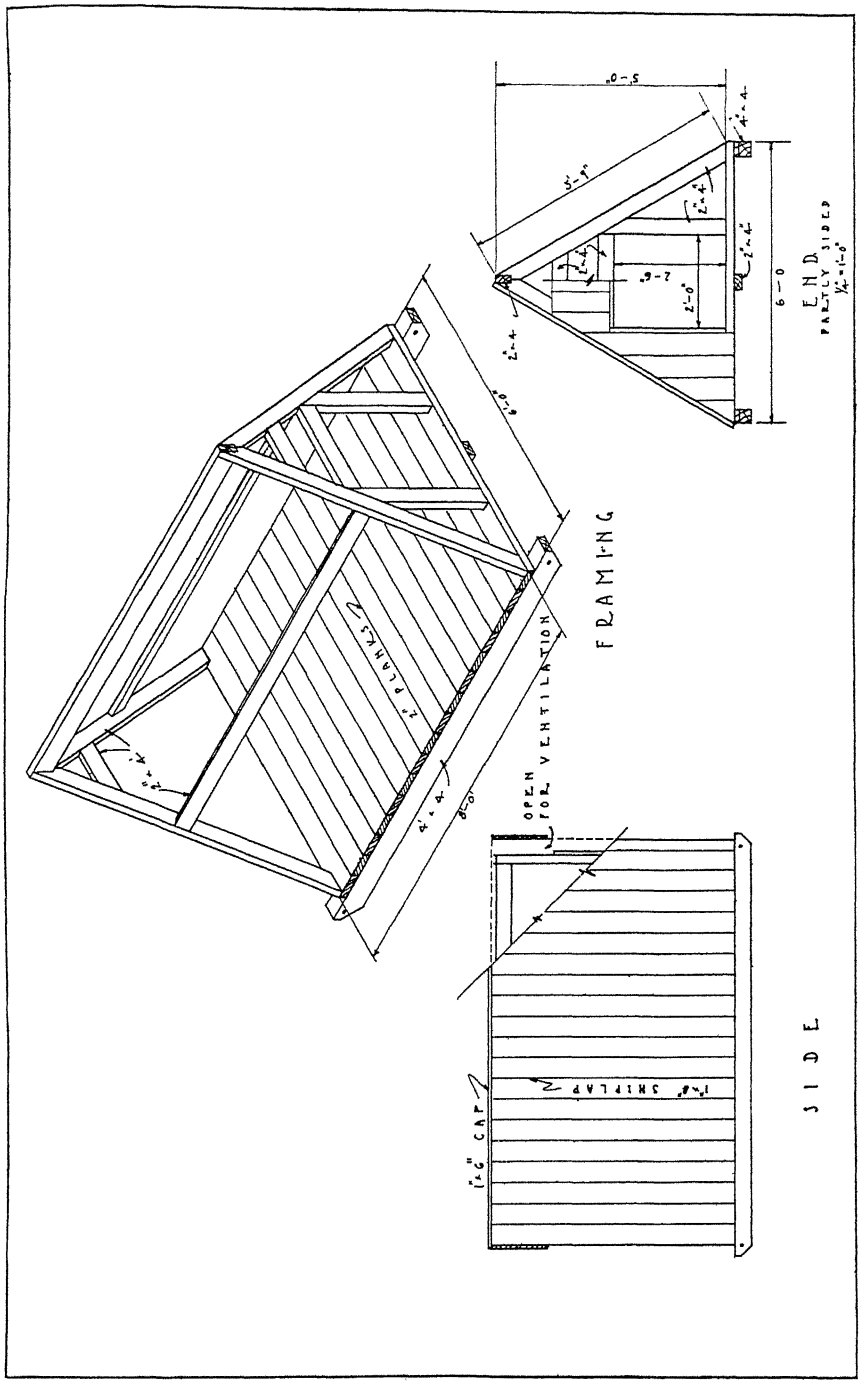

Fig. 15.—A 6′ x 8′ A-shape house.

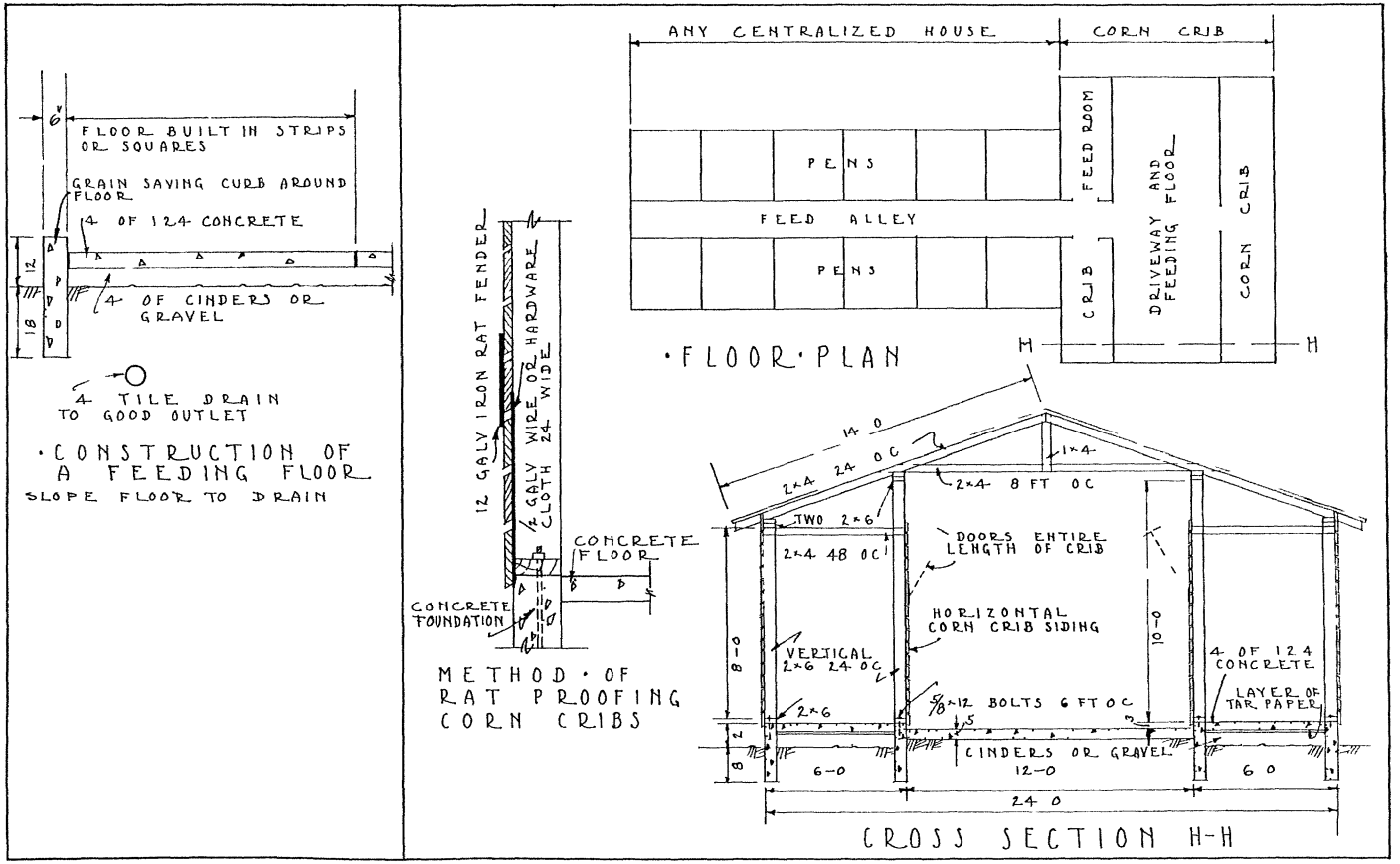

Fig 16.—A suggestion for efficiently arranging any centralized house with a corn crib attached to the hog house to save time and labor in feeding

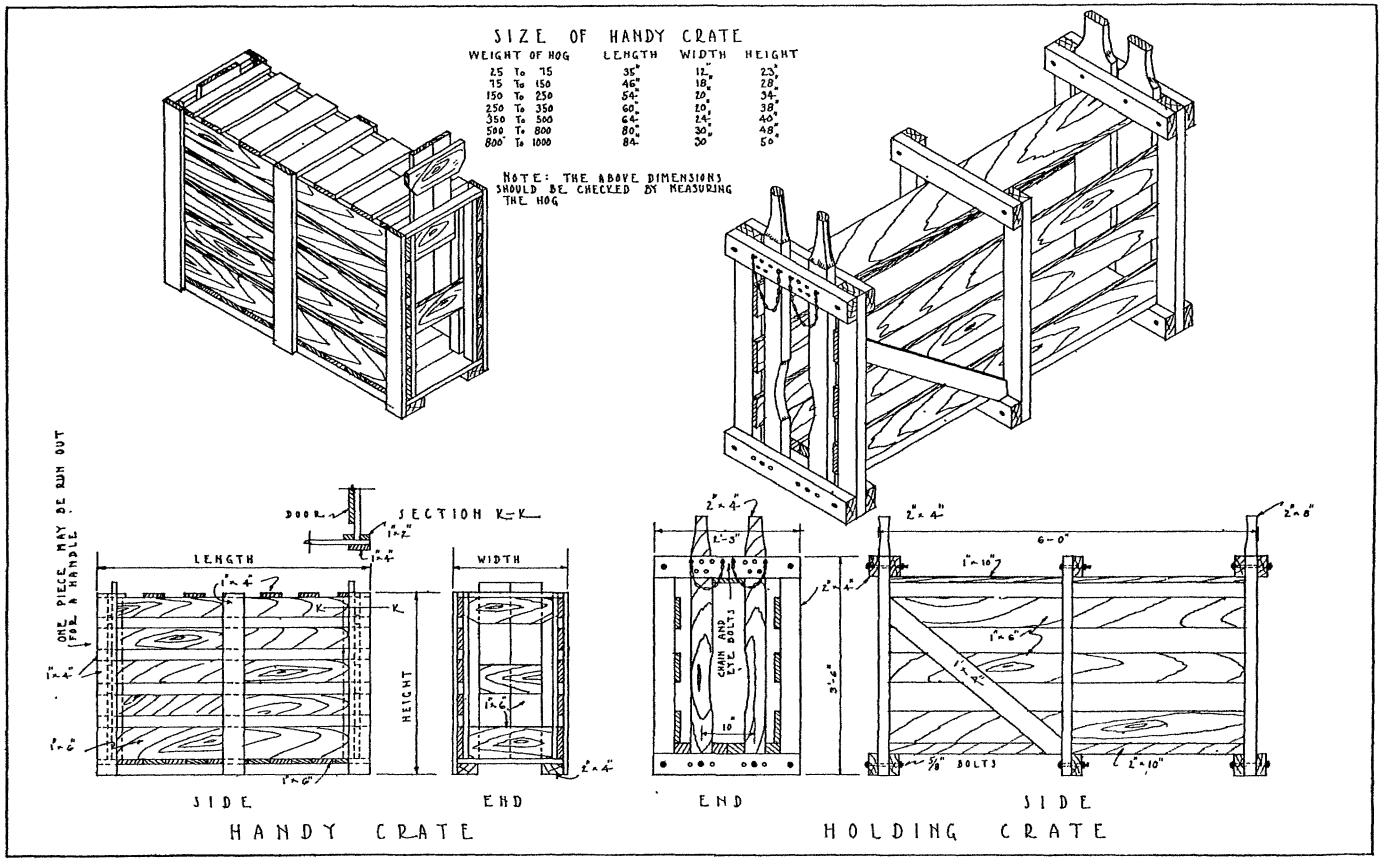

Fig. 17.—Plans for a handy crate and holding crate.

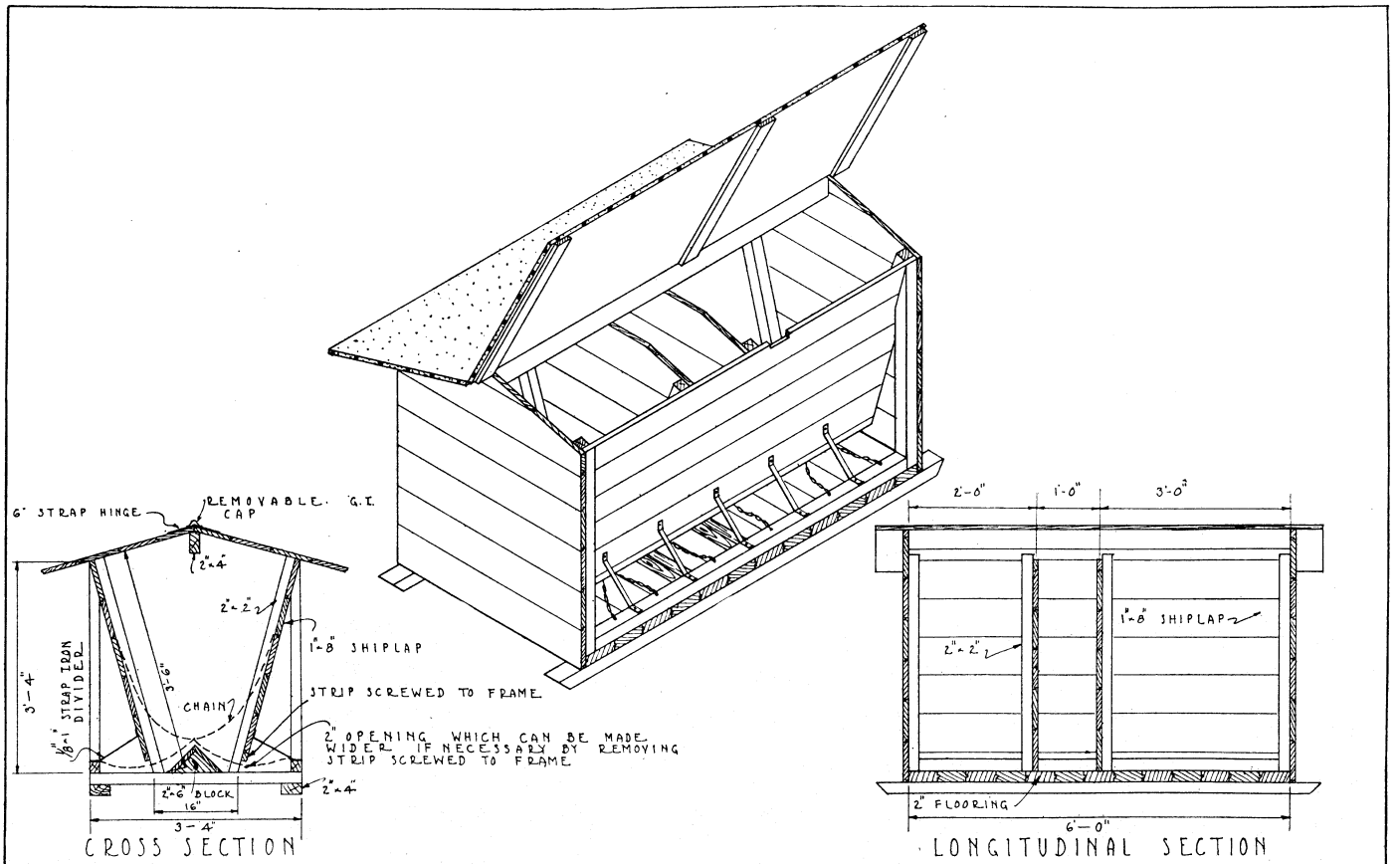

Fig. 18.—A hog self feeder.